

IN THE SPECIFICATION

Please replace the Title of the Invention with the following Title:

HIGH DENSITY ANALOG RECORDING USING WRITE SYMBOLS HAVING  
DISTINGUISHABLE READOUT WAVEFORMS

Please insert the following paragraphs starting on page  
9, line 6:

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FIGS. 10A-10B are flow diagrams illustrating write and read procedures, respectively.

FIG. 11 is a flow diagram illustrating a procedure for defining a set of write symbols.

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Please insert the following paragraphs starting on page  
23, line 6:

FIG. 10A is flow diagram illustrating a write procedure. The write procedure for recording data on a recording medium may comprise a step 200 and a step 202. The step 200 may comprise mapping data to be recorded to a set of write symbols. Each of the write symbols may represent more than one bit of the data. The step 202 may comprise writing the data to a recording medium using the write symbols.

FIG. 10B is a diagram illustrating a read procedure. The read procedure may comprise a step 210 and a step 212. The step 210 may comprise reading an analog readout waveform from the recording medium. The step 212 generally comprises recovering data from the readout waveforms by comparing the analog readout waveforms to pre-stored waveforms. The comparison may include using matched filter detection, pattern recognition, cross-correlation coefficients, DC levels and/or a Viterbi detector.

*or!*  
*Cont*

FIG. 11 is a diagram illustrating a procedure for defining a set of write symbols. The set of write symbols may be defined by a procedure comprising (i) defining a set of variable write parameters (e.g., the block 220), (ii) generating a plurality of candidate write symbols that specify different values of the variable write parameters (e.g., the block 222), (iii) generating a plurality of candidate readout waveforms produced by the plurality of candidate write symbols (e.g., the block 224), (iv) analyzing the readout waveforms to determine a set of distinguishable readout waveforms, or waveforms matching a readout channel (e.g., the block 226) and (v) selecting selected ones of the plurality of candidate write symbols that correspond to the distinguishable readout waveforms or the waveforms matching the read/write channel for inclusion in the set of write symbols (e.g., the block 228).

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